REMARKS

This paper is being provided in response to the Final Office Action dated August 10, 2005, for the above-referenced application. In this response, Applicant has amended claims 1 and 12 to clarify that which Applicant considers to be the invention. Applicant respectfully submits that the amendments to the claims are fully supported by the originally-filed specification.

The rejection of claims 1 and 12 under 35 U.S.C. 112, first paragraph, has been addressed by amendments to the claims provided herein in accordance with the guidelines set forth in the Office Action. Applicant respectfully submits that the claims, as currently configured, are fully supported by the originally-filed application. See, for example, FIG. 2 of the present application, which shows a signal controller (50), a voltage generator block (20) coupled to the signal controller (50), and an impedance converter block (30) coupled to the signal controller (50) and coupled to and separate from the voltage generator block (20). Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

The rejection of claims 1 and 3-7, 12 and 13 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,160,533 to Tamai et al. (hereinafter "Tamai") is hereby traversed and reconsideration is respectfully requested in view of the amendments to the claims contained herein.

Independent claim 1, as amended herein, recites an LCD control unit for driving an LCD panel in an LCD device. The LCD control unit is recited as including a signal controller for generating a voltage address signal and a polarity control signal, a voltage generator block, coupled to the signal controller, for internally generating a plurality of (n) γ-voltage levels and a plurality of (m) Vcom-voltage levels. The voltage generator block is recited as including a voltage selecting block, where output of the voltage generating block is selected by the voltage selecting block from the plurality of (n) γ-voltage levels and the plurality of (m) Vcom-voltage levels according to a value of the voltage address signal input to the

voltage generator block. The LCD control unit is recited as also including an impedance converter block, coupled to the signal controller and coupled to and separate from the voltage generator block, that converts input impedances of the γ-voltage levels and the Vcom-voltage levels provided by the voltage generator block and provides as output a specified number of the γ-correction voltages and the Vcom voltage according to a value of an input polarity signal, and an LCD driver for generating a set of display data signals based on a set of external data signals, where the LCD driver receives the specified number of the γ-correction voltages output from the impedance converter and includes a γ-correction section for correcting voltages of the display data signals based on the specified number of the γ-correction voltages. Claims 2-7 depend directly or indirectly on independent claim 1.

Independent claim 12, as amended herein, recites a display control unit for driving a display panel in a display device. The display control unit is recited as including a signal controller for generating a voltage address signal and a polarity control signal, a voltage generator block, coupled to the signal controller, for internally generating a plurality of (n) γ-voltage levels and a plurality of (m) Vcom-voltage levels. The voltage generator block is recited as including a voltage selecting block, where output of the voltage generating block is selected by the voltage selecting block from the plurality of (n) γ-voltage levels and the plurality of (m) Vcom-voltage levels according to a value of the voltage address signal input to the voltage generator block. The display control unit is recited as also including an impedance converter block, coupled to the signal controller and coupled to and separate from the voltage generator block, that converts input impedances of the γ-voltage levels and the Vcom-voltage levels provided by the voltage generator block and provides as output a specified number of the γ-correction voltages and the Vcom voltage according to a value of an input polarity signal and a display driver for generating a set of display data signals based on a set of external data signals, where the display driver receives the specified number of the γ-correction voltages output from the impedance converter and includes a γ-correction section for correcting voltages of the display data signals based on the specified number of said γ-correction voltages. Claim 13 depends from independent claim 12.

The Tamai reference discloses a method and apparatus for driving a display panel. The system includes a reference voltage having a voltage level that increases or decreases stepwise with time. Gradation display is conducted by applying the voltage level at certain times to electrodes of the display panel. Multi-level gradation display is conducted without increasing the number of terminals to which voltage is inputted or the number of switching elements for applying the voltage to the electrodes. (See col. 5, lines 24-41 and col. 6, line 59 to col. 7, line 12 of Tamai). As set forth in the Office Action, Tamai discloses a voltage generator block for generating a plurality of voltage levels and a voltage selecting block for selecting a specified number of the voltage levels where the voltage selecting block includes an impedance converter (see, for example, page 5, line 2-3 of the Office Action).

In contrast to the Tamai reference, the present claims specifically recite that the voltage generator block includes a voltage selecting block and that the impedance converter block is separate from the voltage generator block. Thus, Applicant's claims as presently amended provide that the impedance converter is separate from the voltage selecting block. As set forth in the Office Action, Tamai teaches teh opposite: that the voltage selecting block *includes* an impedance converter. There does not appear to be any disclosure or teaching in Tamai to have the impedance converter be separate from the voltage selecting block as provided for in Applicant's claims.

For example, FIG. 4 of Tamai shows a plurality of switches AS1-AS8 that have been characterized in the Office Action as impedance converters. However, these switches are disclosed in Tamai as being part of a voltage selection circuit 63. Accordingly, even if the switches AS1-AS8 perform an impedance conversion is set forth in the Office Action, the disclosure in Tamai that the switches AS1-AS8 operate to provide voltage selection for the voltage selection circuit 63 is contrary to the specific recitation in Applicant's present claims, as currently amended, which recite that the voltage generator

block includes a voltage selection block and the impedance converter block is separate from the voltage generator block and therefore separate from the voltage selection block.

Accordingly, in view of the above, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

The rejection of claim 2 under 35 U.S.C. 103(a) as being unpatentable over Tamai in view of U.S. Patent No. 5,910,796 to Gormish (hereinafter "Gormish") is hereby traversed and reconsideration is respectfully requested in view of the amendments to the claims contained herein.

The features of claim 1 are discussed above with respect to Tamai. Claim 2 depends therefrom.

The Gormish reference discloses a method of performing gamma correction for a display device. The Office Action cites Gormish as disclosing software controlling and setting gamma correction signals.

Applicant respectfully submits that Gormish fails to overcome the above-noted deficiencies of Tamai with respect to Applicant's claimed invention. Accordingly, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

Based on the above, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 508-898-8603.

Respectfully submitted,
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